

Instructions for S&H001 Subcontractor Safety, Health, And Radiological Requirements

1.0 PURPOSE

This document is intended to promote a safe and healthful work environment for all Subcontractor and lower-tier Subcontractor employees working at the Rocky Flats Environmental Technology Site (RFETS), hereafter referred to as “the Site”.

2.0 SCOPE

This document specifies mandatory safety and health requirements for all Subcontractor and lower-tier Subcontractor work performed at the Site. This document's requirements also apply to work conducted for the Site at off-Site leased facilities (e.g., Mountain View). It does not apply if the service/work is conducted at the subcontractor's own premises. General requirements (see Section 6.0) are applicable to all Subcontractor and lower-tier Subcontractor work performed regardless of the type. Specific requirements (see Section 7.0) are applicable only to Subcontractor and lower-tier Subcontractor work involving Construction, Environmental Sampling/Monitoring, and Maintenance and Operations.

3.0 DEFINITIONS

Documentation Exempt Routine Activities – as defined by the Integrated Work Control Program Manual. IWCP Documentation Exempt Activities do not require the form to be signed by an Occupational Safety and Industrial Hygiene representative (page 3 of the form); but, the remainder of the form must be completed.

Construction – any combination of work involving erection, installation, assembly, demolition, or fabrication activities which:

- create a new facility, or
- alter, add to, rehabilitate, dismantle, or remove an existing facility, or
- alter and/or repair buildings or other property (including dredging, excavating, and painting) ,or
- are conducted as part of environmental restoration and remediation projects (including construction, demolition and excavation activities).

Environmental Monitoring/Sampling – any type of work involving observation and measurement of contaminant concentrations necessary to identify potential health hazards and evaluate the need for or adequacy of protective measures. Examples include ground water and surface water sampling, biota sampling, air sampling, and soil sampling.

Imminent Danger – a condition or situation, including exposure to radiation and toxic/hazardous chemicals, which if not immediately corrected, could result in serious injury or death.

Maintenance and Operations – any type of work activities strictly designed to maintain and/or operate facilities and/or equipment. Examples include elevator maintenance, HVAC maintenance, automotive maintenance, warehousing, and weed control.

Radiological Work – Work performed in environments where the potential exists for personnel exposure to radiation and/or radioactive materials or potential radioactive release to the environment.

Radiological Instrumentation Source & Device Committee (RISDC) – group that oversees and approves procurement and application of radiological detection instrumentation, radiological sources and radiation generating devices at RFETS.

4.0 SAFETY, HEALTH AND RADIOLOGICAL REQUIREMENTS FORM

During the development of the Statement of Work (SOW), but prior to solicitation, the Requisitioning Manager (RM) or Contract Technical Representative (CTR) is responsible for completing the Subcontractor Safety, Health and Radiological Requirements Form, S&H001. This form utilizes a graded approach to tailor safety and health requirements for performance of proposed tasks.

All projects, except those that will be non-IWCP Documentation Exempt Activities, require that a Hazard and Discipline Identification Tool (HDIT) be completed, to identify those disciplines that are to be involved in the development of the SOW. Review and sign-off of the S&H001 form by Safety and Health representatives may be done by authorized points of contact at the level of the contracting Project, or by K-H Occupational Safety and

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Health. A current list of the authorized points of contact is kept on the K-H OS&IH web site, on the procurement web page.

Prospective bidders should assure themselves that an approved Safety, Health and Radiological Health Requirements Form is included with this solicitation and that they understand the options selected. If the completed Safety, Health and Radiological Requirements Form is not included with this solicitation package, it is the bidder's responsibility to notify the Contractor's Subcontract Administrator (SA) immediately to obtain a copy.

5.0 RESPONSIBILITIES AND AUTHORITIES

The Contractor has the following responsibilities and authorities:

- Initiating S&H001 form and applicable accompanying documentation.
- Developing a complete Statement of Work that has been reviewed and approved by the appropriate disciplines
- Ensuring Subcontractor compliance with applicable requirements and regulations.
- Ensuring Subcontractors (including any lower-tier Subcontractors) meet all minimum safety, health, and radiological approval requirements before performance of work.
- Conducting Project safety, health and radiological oversight, inspections and audits of the subcontractor.

The Subcontractor has the following responsibilities and authorities:

- Ensuring that all employees and any lower-tier Subcontractors are provided with a workplace free from recognized hazards that are causing or likely to cause death or serious physical harm.
- Ensuring all employees and lower-tier Subcontractors are properly trained and/or qualified for the work that they perform.
- Ensuring all lower-tier Subcontractors meet the minimum safety, health, and radiological approval requirements before performance of work.
- Ensuring Subcontractor compliance to all applicable regulations and Site requirements. Copies of Department of Energy (DOE) and other Site-specific documents are available for review from the Rocky Flats Reading Room - located at Front Range Community College, 3705 W. 112th Avenue, Westminster, Colorado 80030, (303) 469-4435.

6.0 GENERAL REQUIREMENTS

The following requirements are applicable to all work performed at the Site regardless of work type.

A. Regulatory Requirements

Subcontractors shall comply with all applicable provisions of federal, state, and local safety, health and radiological statutes, codes, regulations, and orders, as well as Site requirements. If there is a conflict between the provisions of this document and the safety, health and radiological regulations specified below, the more stringent provision shall prevail. The following list contains examples of requirements that may be applicable to work at the Site, but is not all-inclusive:

Federal Requirements

- Contract Work Hours and Safety Standards Act of 1969
- Public Law 91-596 Occupational Safety and Health Act of 1970
- 10 CFR 830.122 Nuclear Safety Management-Quality Assurance Requirements
- 10 CFR 835 Occupational Radiation Protection
- 10 CFR 850 Chronic Beryllium Disease Prevention Program
- 29 CFR 1904 OSHA Record keeping and Reporting Occupational Injuries and Illnesses
- 29 CFR 1910 Occupational Safety and Health Administration (OSHA) General Industry Standards
- 29 CFR 1926 OSHA Construction Industry Standards.

DOE Requirements

- DOE Order 231.1, Environment, Safety and Health Reporting.
- DOE M 231.1-1, Environment, Safety and Health Reporting Manual.
- DOE N 231.1, Environment, Safety and Health Reporting Notice
- DOE Order 440.1A, Worker Protection Management for DOE Federal and Contractor Employees.

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Site Requirements

- MAN-016-ISM, Integrated Safety Management System Manual
- MAN-019-CMM-001, Chemical Management Manual
- MAN-064-SAPM, Site ALARA Program Manual
- MAN-066-COOP, Conduct of Operations Manual
- MAN-071-IWCP, Integrated Work Control Program Manual
- MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual.
- MAN-092-M&TEM, Measuring and Test Equipment Management Manual
- MAN-094-TPM, Training Program Manual
- MAN-102-SRCM, RFETS Radiological Control Manual
- MAN-103-RST&QP, Radiological Safety Training and Qualification Program
- MAN-131-QAPM, Quality Assurance Program Manual
- 1-MAN-009-PMM, Property Management Manual
- 1-Q 50-RPP-0001, RFETS Radiation Protection Program
- 1-V41-RM-001 Records Management Manual
- 3-I27-RP-2001, Radiation Protection Administrative Procedures, "Guidance for Management of Records in Radiological Control"
- RFETS Radiological Safety Practices
- Health Physics Instrumentation Procedures
- Health and Safety Practices Manual
- Waste Stream and Residue Identification and Characterization (WSRIC); for applicable facilities

B. Signs, Postings, and Announcements

All personnel shall comply with all Site signs, postings, and Life Safety and Disaster Warning (LSDW) system announcements.

C. Imminent Danger

In the event of imminent danger, any worker on the Site has the authority to stop work. In the event of a stop work order, the operation or task involved shall be placed in a safe configuration (if possible). The operation shall not resume until corrective actions are approved, and a Start Work Order is issued by the Contractor.

D. Authority to Remove Project Personnel for Safety, Health and Radiological Issues

The Contractor has the authority to require the Subcontractor to replace any subcontractor personnel determined to be responsible for any safety, health and radiological safety program inadequacies or deficiencies identified through work review or audit. The Contractor Site Radiation Protection Manager has full authority over all radiological work conducted at RFETS.

E. Training

Health and Safety

All Subcontractor personnel shall be properly trained and/or qualified for the work that they perform. Only those employees qualified by training or experience shall be permitted to operate equipment or machinery. Written records that document required training shall be submitted to the CTR prior to start of performance, and originals shall be maintained and readily available for review. The CTR is responsible for utilizing the Credit for Training form as needed to document satisfactory training and qualification for subcontractors working at the Site. Unless specifically agreed upon otherwise by subcontract (i.e. Site Specific Training), the Subcontractor is responsible for all costs associated with any required employee safety and health training (i.e. 29 CFR 1910, 29 CFR 1926, etc.).

Refer to applicable sections of MAN-072-OS&IH PM, Occupational Safety & Industrial Hygiene Program Manual and MAN-094-TPM, Training Program Manual – Table 1, Training Requirements. Subcontractors, including lower-tier Subcontractors, are responsible for briefing their employees on Site-specific requirements and documenting such briefings. The Subcontractor shall maintain written records of these briefings that are readily available for review.

Radiological

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All managers, supervisors, technicians, and engineers with direct responsibility for development and/or implementation of radiation protection functions must be qualified in accordance with the Radiological Safety Training and Qualification Program Manual, MAN-103-RST&QP.

F. Site Orientation

All Subcontractor employees shall successfully complete the Rocky Flats Environmental Technology Site Orientation Program computer based training class prior to beginning work. This class is administered as part of the employee badging process and requires (among other things) that employees be knowledgeable about general Site safety and health rights, responsibilities, and requirements.

G. Safety and Health Meetings

The Subcontractor's Project Supervisor or his/her designee shall conduct formal safety meetings for all personnel. To promote safety and reduce risk, topics should be applicable to the work being performed and/or those potentially hazardous conditions, events or findings observed. A meeting outline and attendance roster signed by all attendees shall be used as documentation of the meetings. A copy of the outline shall be provided to the CTR within 24 hours of its presentation. The Subcontractor shall maintain written records that document required meetings that are readily available for review. These meetings shall be conducted in accordance with the following frequencies:

Construction, D&D, or Environmental Restoration	Weekly
Environmental Sampling/Monitoring	Weekly
Maintenance and Operations	Weekly
Administrative/Office Support/Technical/Professional	Quarterly

H. Pre-Evolution Briefings or Job Task Briefings

When applicable, Pre-Evolution Briefings or Job Task Briefings shall be conducted in accordance with the requirements specified in the Conduct of Operations Manual (MAN-066-COOP).

I. Notification of Accidents and Near Miss Accidents

As soon as practicable, but not more than 2 hours after occurrence, the following shall be verbally reported to the CTR and the Contractor's Project Safety and Health Office:

- All work related accidents involving employee injury/illness, government vehicles, and/or property damage.
- All work related near miss type accidents that could have resulted in a serious injury/illness and/or property damage.

The Contractor's Project Safety and Health Office shall notify the K-H Safety and Industrial Hygiene department of this information as soon as possible, but no later than the next regular business day.

Within three workdays following a work-related accident or incident, the Subcontractor shall complete a DOE Individual Accident/Incident Report - Form 5484.3 (Attachment 4) and shall submit copies to the CTR and Contractor's Project Safety and Health Office. The Subcontractor shall maintain written accident or incident records that are readily available for review.

J. Monthly Contractor Injury/Illness Statistics Report

No later than close of business on the second regular business day following the month being reported, the Subcontractor shall complete the Monthly Subcontractor Injury/Illness Statistics Report (Attachment 3) and submit it to the CTR and the Contractor's Project Safety and Health Office. The Subcontractor shall maintain written records that are readily available for review.

The Contractor's Project Safety and Health Office(s) shall provide the K-H Safety Assessment Center (x5626), Building 115, a summary of this information no later than close of business on the third regular business day following the month being reported.

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K. Seatbelts

Seatbelts and anchorages that meet the requirements of 49 CFR 571 shall be installed and worn in all motor vehicles. On all buses so equipped, the driver and passengers shall wear seatbelts. Construction equipment seatbelts and anchorages shall comply with applicable federal specifications or SAE J386a, and operators shall wear them in accordance with the manufacturer's instructions.

L. Housekeeping

The Subcontractor shall maintain all work locations in a neat and orderly manner, and shall perform housekeeping (clean-up) of work locations at least once daily. If the Subcontractor performs work outside Site facilities, it shall implement control measures to assure that debris or material is not wind blown across the Site.

M. Personnel Protective Equipment (PPE)

Unless specifically agreed upon otherwise by contract, the Subcontractor is responsible for all costs associated with any required PPE for its employees and the employees of any lower-tier Subcontractor. PPE selection shall be identified in the Job Hazard Analysis (JHA). The Subcontractor shall ensure that PPE is used and maintained in a sanitary and reliable condition whenever it is required by the work being performed.

N. Physical Examinations, Respiratory Protection, and Health Hazard Monitoring

When required by the Subcontractor Safety, Health and Radiological Requirements Form or as the work environment dictates, the Subcontractor shall ensure and document that employee physical examinations are properly conducted. It is the responsibility of the Subcontractor to ensure that their examining physician provides medical examinations in accordance with applicable OSHA and DOT regulations.

At a minimum, physical examinations shall be conducted and documented in accordance with the requirements specified in Attachment 5 - RFETS Subcontractor Employee Medical Approval. The Subcontractor shall submit copies of Attachment 5 to the Site Occupational Medicine Department prior to beginning performance, and shall maintain originals readily available for review.

The Contractor will provide all medical surveillance (i.e. physical examinations and associated testing) required by or associated with the Chronic Beryllium Disease Prevention Program. The Subcontractor shall not add new Beryllium Workers or Beryllium Screened Workers to complete the Statement of Work without prior approval from the following: Contractor's Project Safety and Health Office and cognizant K-H Vice President of Operations. This approval will be communicated to the subcontractor by the CTR.

When required by the Subcontractor Safety, Health and Radiological Requirements Form, or as the work environment dictates, the Subcontractor shall ensure and document that employee respirator fit testing and training are properly conducted. At a minimum, respirator fit testing and training shall be conducted and documented in accordance with the requirements specified in Attachment 6 - Subcontractor Respirator Quantitative Fit Test Approval and Attachment 7 - Subcontractor Record of Respirator Training. The Subcontractor shall submit copies of Attachments 6 and 7 to the Site Occupational Medicine Department prior to beginning performance, and shall maintain originals readily available for review.

To obtain Site Respirator Qualification Cards for its employees, the Subcontractor must submit to the Site Occupational Medicine Department valid copies of Attachments 5, 6, and 7 for all affected employees, and copies of Attachments 6 and 7 to Site Training Records. Once the forms are complete and submitted, Occupational Medicine will issue the individual Site Respirator Qualification Cards.

When required, the Subcontractor shall conduct health hazard monitoring based on the activity to be performed (asbestos abatement, lead abatement, 1910.120 hazardous waste work, etc.). Unless specifically exempted by the KH Safety and Industrial Hygiene Department, the Subcontractor shall submit all air, surface, and bulk samples taken that require laboratory analysis to an American Industrial Hygiene Association (AIHA) accredited laboratory. The Subcontractor shall submit a copy of the written laboratory analysis report and industrial hygiene summary report (including calculated results) to the Contractor's Project Safety and Health department within two workdays following receipt of the results. The Contractor's Project Safety and Health Office shall provide the K-H Safety and Industrial Hygiene Department this information,

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including hard copy and entry into the Industrial Hygiene Information System (IHIS), as soon as possible, but no later than the next regular business day after receipt.

Except for medical surveillance associated with the Chronic Beryllium Disease Prevention Program and PSAP, the Subcontractor shall pay all costs associated with required physical examinations, respirator fit testing, respirator training, and health hazard monitoring for its employees and employees of its lower-tier Subcontractors.

7.0 SPECIFIC REQUIREMENTS

Subcontractors who perform Construction, Environmental Monitoring/Sampling; or Maintenance and Operations work (as indicated on the Safety, Health and Radiological Requirements Form) shall comply with the applicable portions of the following requirements.

A. Subcontractor Approval Process

All Subcontractors who perform Construction, Environmental Monitoring/Sampling; or Maintenance and Operations work shall be "approved." The RFETS Subcontractor Safety and Health Approval Process is an evaluation method used to assure that Subcontractors meet pre-established minimum safety and health criteria before they are awarded work at the Site. All affected Subcontractors, including lower-tier Subcontractors, shall complete and submit a Subcontractor Safety and Health Worksheet (Attachment 2) for approval by the Contractor prior to any subcontract award. The Subcontractor shall submit a Subcontractor Safety and Health Worksheet for each lower-tier Subcontractor that will perform work in support of the contract.

B. Safety and Health Professional Qualifications

When Section 3 of the Subcontractor Safety, Health and Radiological Requirements Form requires, the Subcontractor shall designate a competent and dependable Safety and Health Professional to administer the project's day-to-day safety and health program.

Before commencing work, the Subcontractor shall submit the Safety and Health Professional's qualifications for review and approval by the Contractor's Project Safety and Health Office. The Safety and Health Professional shall have the following minimum qualifications:

- Five years of experience as a Safety and Health Professional.
- Certification by a recognized professional safety and health organization. Acceptable certifications include, but are not limited to: Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH).
- Training and experience in the abatement and mitigation of the potential hazards anticipated to be encountered during performance of the task (i.e. ladder safety, hoisting and rigging safety, fall protection, excavation and trenching safety, electrical safety, asbestos, lead, PCB's, etc.).

C. Safety and Health Designee Qualifications

When Section 3 of the Subcontractor Safety, Health And Radiological Requirements Form requires, the Subcontractor shall designate a competent and dependable supervisory employee to administer the project's day-to-day safety and health program.

Before commencing work, the Subcontractor shall submit the Safety and Health Designee's qualifications for review and approval by the Contractor's Project Safety and Health Office. The Safety and Health Designee shall have the following minimum qualifications:

- Five years of experience as a Construction Supervisor with an emphasis in construction project safety management.
- Certification through an OSHA 30-Hour Safety and Health Outreach Training Program in Hazard Recognition, the National Safety Council's Supervisor Safety Training Program, or equivalent training.
- Training and experience in the abatement and mitigation of the potential hazards anticipated to be encountered during performance of this task (i.e. ladder safety, hoisting and rigging safety, fall protection, excavation and trenching safety, electrical safety, asbestos, lead, PCB's etc.).

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D. Safety and Health Professional/Designee Responsibilities

The Safety and Health Professional/Designee shall assist line managers and supervisors to implement all applicable safety and health programs and plans. This responsibility may include, but is not necessarily be limited to:

- Correcting unsafe conditions and practices, up to and including work stoppage, if necessary.
- Performing Pre-Construction Site Specific Health and Safety Orientation, Weekly Safety Meetings, and Job Task Briefings or Pre-evolution Briefings.
- Performing required physical, chemical, biological, or other hazard monitoring.
- Performing daily job site safety and health inspections; documenting the date of the inspection, findings, observations, and corrective actions in a separate logbook; and keeping the logbook available for review at the work location at all times.
- Investigating all accidents/ incidents and assuring the availability of all information, personnel, and data pertinent to the investigation.
- Preparing and submitting required safety related reports/submittals.

E. Safety and Health Plans

In Section 3 of the S&H001 Form, the Contractor (K-H or Project) OS&IH representative who will conduct oversight of the subcontractor's work makes the determination of whether a Health and Safety Plan is needed for that subcontract work, and what type of plan it shall be, based on the scope of work, the duration, and regulatory requirements.

If Section 3 of the S&H001 Form is checked to require a Project Health and Safety Plan, the Subcontractor shall prepare a written safety and health plan that addresses implementation of the project's safety and health program. At least 10 days before commencing the work, the Subcontractor shall submit the Safety and Health Plan for review and approval by the Contractor's Project Safety and Health Office. The Safety and Health Plan shall be in writing and:

- Shall be a job-specific safety and health planning document that addresses any unusual or unique aspects of the project or activity
- Shall be prepared in the format specified in Attachment 1.
- For hazardous waste operations type work, shall be written in accordance with the applicable provisions of 29 CFR 1910.120 or 1926. 65, Hazardous Waste Operations and Emergency Response.

F. Project Safety and Health Bulletin Board

In Section 4 of the S&H001 Form, the Contractor (K-H or Project) OS&IH representative who will conduct oversight of the subcontractor's work makes the determination of whether a Health and Safety Bulletin Board is needed for the subcontract work, based on the scope of work, the size of the project area, number of personnel involved and other pertinent information.

If Section 4 of the S&H001 Form is checked "Yes", before commencing work, the Subcontractor shall furnish and install at its expense a Project Safety and Health Bulletin Board.

Bulletin boards shall be: large enough to accommodate all required postings; located centrally where employees and visitors enter the work area; constructed to protect the information posted from the weather; and maintained so that postings are current. At a minimum, the bulletin board shall have the following postings:

- A project information card identifying the project, Subcontractor, CTR, Subcontractor Safety and Health Professional/Designee, emergency phone numbers (i.e. X2911), and after-hour contacts.
- A copy of the approved Subcontractor Safety, Health and Radiological Requirements Form
- Personnel Protective Equipment (PPE) required for entry.
- DOE Poster 5483.1, Occupational Safety and Health Protection for DOE Contractor Employees at Government Owned Contractor-Operated Facilities.
- Colorado Workers Compensation Poster WC49, Workers' Compensation Act.

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G. Visual Equipment Inspection

Before the Subcontractor's lifting, drilling and earth moving equipment is brought onto the Site, the Contractor's Project Safety and Health Department shall conduct visual inspections at the West Gate entrance. The Subcontractor shall schedule such inspections through the CTR at least 24 hours in advance of bringing the equipment on Site. The Contractor has the exclusive right to reject any piece of equipment found to contain deficiencies. The Subcontractor shall correct all deficiencies before using the equipment.

H. Flammable and Combustible Liquids

The Subcontractor shall use approved metal safety cans for flammable and combustible liquids in quantities greater than one gallon. For quantities of one gallon or less, the Subcontractor may use either the original containers or approved metal safety cans. The Subcontractor shall ensure that approved metal safety cans are in good repair, equipped with a spring loaded closing device, flash arrestor, and are properly labeled to indicate contents.

I. Ground Fault Circuit Interrupters

The Subcontractor shall use ground fault circuit interrupters in conjunction with all 125 volt (nominal), single phase, 15-, 20-, and 30- ampere receptacle outlets on all posted construction sites, outdoor activities, or where otherwise required by regulation.

J. Modification of Tools and Equipment

Without prior approval of the CTR, the Subcontractor shall not use tools that it has fabricated or modified. To obtain such approval, the Subcontractor shall provide a Professional Engineer's evaluation of the fabrication or modification, with all supporting documentation signed and stamped with the Professional Engineer's seal. The Subcontractor shall maintain the documentation readily accessible at the job site.

K. Demarcation of Work Areas

To ensure personnel safety, the Subcontractor shall clearly demarcate all work areas that require access control by using metal or plastic fencing, caution tape or other means approved by the CTR. The Subcontractor shall ensure that the minimum PPE requirements are clearly posted at all entrances to the work area. The Subcontractor shall use metal or plastic fencing to secure the perimeter of large work areas where construction activities are in progress, and all open excavations greater than six feet in depth.

L. Energy Isolation and Lockout/Tagout

The Subcontractor shall perform all energy isolation in accordance with Site procedures. The Subcontractor shall obtain an approved Energized Work Permit for all energized electrical work over 50 volts.

M. Surface Penetrations

The Subcontractor shall follow the applicable Site procedures in making any penetrations into Site soil or other facility materials (i.e. concrete, masonry, asphalt, drywall, metal, etc.) where utility hazards such as electrical, natural gas, water, and communications may exist.

N. Adverse Weather Conditions

In the event of adverse weather conditions such as high winds, lightning or other inclement weather the Subcontractor shall limit or curtail activities. Sustained wind speeds above 30 mph, but less than 45 mph require that all work on rooftops and elevated surfaces (i.e., platforms, scaffolds, etc.) be suspended. The Subcontractor shall obtain approval from the Contractor's Project Safety and Health Office before restarting the work.

O. Spill Control

The Subcontractor shall use appropriate spill control measures at all work locations. The Subcontractor shall ensure that double containments, single containments, and response materials are appropriate, available at the work location, clearly identified as spill response equipment, and inspected monthly.

P. Chemical Control

The Subcontractor shall manage all chemicals used on Site in accordance with the Site's Chemical Management Manual (MAN-019-CMM-001). The Subcontractor shall maintain Material Safety Data Sheets for all chemicals at the work site, and shall ensure that all chemicals are labeled and properly stored. Before

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it brings chemicals onsite, the Subcontractor shall submit an inventory through the CTR to the Chemical Management and Tracking Department for approval. The Subcontractor shall continually update the project chemical inventory, and shall maintain a copy at the work site. The Subcontractor shall provide Hazard Communication training to its workers for chemicals they use or may be exposed to in an emergency.

Q. Compressed Gas Cylinders

The Subcontractor shall use and store compressed gas cylinders in accordance with Site procedures. The Subcontractor shall ensure that its compressed gas cylinder storage racks are equipped with a positive latching mechanism.

R. Minimum Personal Protective Equipment (PPE)

The Subcontractor shall ensure that the following minimum PPE requirements are enforced for all personnel who enter posted construction areas. Exceptions must be obtained in writing from the Contractor's Project Safety and Health Office.

- Hard Hats. Except as noted here, all personnel shall wear ANSI Z89.1 approved hard hats in accordance with the manufacturer recommendations. Crane and heavy equipment operators under rollover protective structures in an enclosed cab are excepted from wearing a hard hat while they are in the cab. Chinstraps shall be issued and worn as required.
- Eye Protection. All personnel shall wear ANSI Z 87.1 approved industrial strength eye protection with side shields. Dark tinted lenses are prohibited during the hours of darkness or within buildings, enclosures or structures. The Subcontractor shall provide and ensure the use of additional ANSI approved PPE for the protection of the eyes and face, when specified or required.
- Foot Protection. All personnel shall wear over-the-ankle work boots with ANSI Z41.1 approved safety toe caps. Personnel who operate hand-held equipment with a drive piston for concrete demolition or earth compaction shall also have metatarsal protection.
- Work Clothing. All personnel shall wear long pants and shirts that cover the shoulders with a minimum of 4 inches of sleeve. Shorts are strictly prohibited.
- Vests. All personnel who work on or near a roadway, or who spot for heavy equipment shall wear high visibility vests. For night work, all vests shall also have reflective properties.

S. Vehicle Size Limitations and Clearance Requirements

- Any vehicle or equipment, including self propelled PITs, earthmoving, off road and construction equipment are subject to the following size restrictions on Site:
Length: 80 feet
Width: 102 inches
Height: 13 feet, 6 inches
- Vehicles exceeding one or more of the above dimensions **SHALL** be subject to an appropriate route plan which must be approved by the Kaiser-Hill Project Health and Safety organization.
- Minimum clearances to energized lines must be maintained while operating equipment during work and during transit. The chart below identifies the Site minimum clearances. Exceptions to these limits must be approved in writing by the Kaiser-Hill Project Health and Safety organization.

Voltage	Working Clearance	Traveling with <u>Structure Lowered</u>
Up to 50kV (most lines on Site are 13.8 kV or less)	10 feet	4 feet
Over 50 kV	10 feet plus 0.4 " for every kV over 50 kV	10 feet
115 kV (line feeding substation on Central	12 feet, 2 inches	10 feet

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Before movement of equipment exceeding these size limitations or that must traverse under energized power lines, personnel **SHALL** traverse the route in advance of the vehicle in order to determine that it is free of obstruction and spotters **SHALL** be used to ensure required clearances are maintained.